

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-45 are pending in the application, with 1 and 26 being the independent claims. Claims 1, 10, 26 and 27 are sought to be amended. Paragraphs [0043] and [0047] are also sought to be amended. These changes introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Examiner Interview

Applicants thank the Examiner for the interview conducted on November 3, 2005. During the interview, Applicants discussed with the Examiner the independent claims and how the claimed invention distinguishes over the applied references.

Amendments to the Specification

Applicants have amended paragraph [0043] to recite and include a definition for referred engine diagnostic data. The definition was taken from column 3, lines 16-20 of U.S. Patent No. 5,018,069, issued May 21, 1991 to James L. Pettigrew. Because U.S. Patent No. 5,018,069 is incorporated by reference in its entirety in the present application, the added text is not new material.

Applicants have amended paragraph [0047] of the specification to correct a minor grammatical error.

These changes do not add new matter, and their entry is respectfully requested.

Objection to Claims 10, 27-41, and 44

On page 2 of the Office Action, the Examiner objected to claims 10, 27-41 and 44 because of minor informalities relating to claims 10 and 27. Applicants have corrected these informalities as suggested by the Examiner. Reconsideration and withdrawal of this objection is respectfully requested.

Rejections under 35 U.S.C. § 102

On page 2 of the Office Action, the Examiner rejected claims 1, 2, 4, 10-15, 19-22, 26-29, 36, and 39-42 for allegedly being anticipated by U.S. Patent No. 6,411,869 to Permanne ("Permanne"). Applicants respectfully traverse this rejection.

Independent claim 1, as amended, recites:

A system for generating and displaying engine performance data for an operating aircraft, comprising:

a data acquisition module that acquires sensor data from a sensor that monitors an engine performance related parameter;

an engine performance monitoring module, coupled to the data acquisition module, that compares sensor data acquired by the data acquisition module to referred engine diagnostic data and computes engine power available data and engine health data; and

a display located in the aircraft, coupled to the engine performance module, that displays engine power available data and engine health data computed by the engine performance monitoring module.

Similar features are recited in independent claim 26.

As discussed with the Examiner during the interview conducted on November 3, 2005, Permanne describes a power margin indicator that calculates values useful, for example, for indicating to a pilot that the collective pitch should be reduced to maintain rotor speed within a predefined margin of a set point. (See Permanne, column 5, lines 7-56.) According to Permanne, these calculations are based on engine manufacturers' established curves of available power. (See Permanne, column 6, lines 54-57.) These engine manufacturers' curves of available power represent fixed values. They are not dynamic values that are computed and/or modified, for example, based on engine sensor data to take into account the particular health of a particular engine at a particular time. Nowhere does Permanne describe or suggest, for example, "an engine performance monitoring module . . . that compares sensor data acquired by the data acquisition module to referred engine diagnostic data and computes engine power available data and engine health data" or "a display located in the aircraft . . . that displays engine power available data and engine health data computed by the engine performance monitoring module," where referred engine diagnostic data values are a measure of the deviation between accepted engine parameter curves representing the functional relationships between various turbine engine performance parameters and actual engine parameter curves. Thus, for at least these reasons, independent claim 1 is patentable over Permanne.

As noted above, independent claim 26 recites features similar to independent claim 1. Thus, independent claim 26 is also patentable over Permanne for reasons similar to those noted above with respect to independent claim 1.

Claims 2, 4, 10-15, 19-22, 27-29, 36, and 39-42 depend from one of independent claim 1 and independent claim 26, either directly or indirectly, and are patentable over Permanne for at least the same reasons that independent claims 1 and 26 are patentable, and further for the specific features recited in claims 2, 4, 10-15, 19-22, 27-29, 36, and 39-42.

Reconsideration and withdrawal of this rejection of claims 1, 2, 4, 10-15, 19-22, 26-29, 36, and 39-42 are respectfully requested.

On page 3 of the Office Action, the Examiner rejected claims 1-4, 8-10, 14, 15, 19, 23-30, 34-36, 40, and 43-45 for allegedly being anticipated by U.S. Patent Application Publication No. US 2004/0254747 A1 by Vollum ("Vollum"). Applicants respectfully traverse this rejection.

Vollum describes an instrument for use in a helicopter having a naturally-aspirated piston engine. According to Vollum, ambient air pressure and ambient air temperature sensor data is used to calculate density altitude and determine, based on engine performance tables supplied by engine manufacturers, an attainable manifold pressure/engine output power. (See, e.g., Vollum, paragraphs [0012] and [0057].) This attainable manifold pressure/engine output power is representative of the power that can be produced by a healthy engine at a given density altitude. Similarly to the engine manufacturers' curves of available power used by Permanne, the engine performance tables used by Vollum represent fixed values. These values are not dynamic values that

are computed and/or modified, for example, based on engine sensor data to take into account the particular health of a particular engine at a particular time. Nowhere does Vollum describe or suggest, for example, "an engine performance monitoring module . . . that compares sensor data acquired by the data acquisition module to referred engine diagnostic data and computes engine power available data and engine health data" or "a display located in the aircraft . . . that displays engine power available data and engine health data computed by the engine performance monitoring module," as recited in independent claim 1. Thus, for at least these reasons, independent claim 1 is patentable over Vollum.

As noted above, independent claim 26 recites features similar to independent claim 1. Thus, independent claim 26 is also patentable over Vollum for reasons similar to those noted above with respect to independent claim 1.

Claims 2-4, 8-10, 14, 15, 19, 23-25, 27-30, 34-36, 40, and 43-45 depend from one of independent claim 1 and independent claim 26, either directly or indirectly, and are patentable over Vollum for at least the same reasons that independent claims 1 and 26 are patentable, and further for the specific features recited in claims 2-4, 8-10, 14, 15, 19, 23-25, 27-30, 34-36, 40, and 43-45.

Reconsideration and withdrawal of this rejection of claims 1-4, 8-10, 14, 15, 19, 23-30, 34-36, 40, and 43-45 are respectfully requested.

Rejections under 35 U.S.C. § 103

On pages 4-6, the Examiner made various rejections of dependent claims 5-7, 11-13, 16-18, 20-22, 31-33, 37-39, 41 and 42 for allegedly being unpatentable over

Vollum, Vollum in view of U.S. Patent No. 5,886,649 to Francois ("Francois"), and Vollum in view of Permanne and U.S. Patent Application Publication No. US 2002/0016654 A1 to Ing et al ("Ing"). Applicants respectfully traverse these rejections.

For at least the reasons described above, each of the claims 5-7, 11-1316-18, 20-22, 31-33, 37-39, 41 and 42 is patentable over Vollum. Francois, Permanne, and Ing, alone or in combination, do not over come the deficiencies of Vollum. Thus, claims 5-7, 11-1316-18, 20-22, 31-33, 37-39, 41 and 42 are patentable over Vollum, Francois, Permanne, and Ing, taken alone or in combination.

Reconsideration and withdrawal of these various rejections of claims 5-7, 11-1316-18, 20-22, 31-33, 37-39, 41 and 42 are respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully
requested.

Respectfully submitted,

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